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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/813,527	03/30/2004	Edward Hosung Park	03-0055	6135

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FREUDENBERG-NOK GENERAL PARTNERSHIP
LEGAL DEPARTMENT
47690 EAST ANCHOR COURT
PLYMOUTH, MI 48170-2455

EXAMINER	
ASINOVSKY, OLGA	
ART UNIT	**PAPER NUMBER**
1711	

DATE MAILED: 09/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/813,527	PARK, EDWARD HOSUNG	
	Examiner	Art Unit	
	Olga Asinovsky	1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-58* is/are pending in the application.

4a) Of the above claim(s) *15-58* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *May 09, 2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-14, drawn to a processable rubber composition comprising a cured fluorocarbon elastomer dispersed in a matrix wherein said matrix comprises a mixture of a fully fluorinated thermoplastic polymer and a partially fluorinated thermoplastic polymer, classified in class 525, subclass 199 and 276.

II. Claims 15-29, drawn to a processable rubber composition comprising a cured fluorocarbon elastomer dispersed in a thermoplastic matrix wherein said matrix comprises a mixture of a fully fluorinated thermoplastic polymer and a partially fluorinated thermoplastic polymer, and wherein said dispersed fluorocarbon elastomer has particle size less than 10 microns, classified in class 525, subclass 188, 200; and class 524, subclass 463.

III. Claims 23-39, drawn to a method for making a processable rubber composition by mixing a fluorocarbon elastomeric component and a thermoplastic component in the presence of a curative agent, classified in class 525, subclass 61, 263, 276.

IV. Claims 40-48, drawn to a shaped article comprising a cured fluorocarbon elastomer dispersed in a matrix comprising a mixture of a fully fluorinated

thermoplastic polymer and a partially fluorinated thermoplastic polymer, wherein the resulting polymer has characteristics specified in the present claims, classified in class 525, subclass 276.

V. Claims 49-53, drawn to a method for reducing cost of a manufacturing process for making a shaped rubber articles from a processable rubber comprising a recycling scrap material, wherein the processable rubber composition is the product of dynamic vulcanization of a fluorinated elastomer in the presence of a mixture of a fully fluorinated thermoplastic polymer and a partially fluorinated thermoplastic polymer, classified in class 521, subclass 45.5.

VI. Claims 54-58, drawn to a process of manufacturing shaped plastic articles by dynamically vulcanizing a fluorocarbon elastomer in the presence of a blend of a fully fluorinated polymer and a partially fluoroinated polymer, classified in class 525, subclass 199, 200, 276.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions of group I and Group II are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions have difference function and different effect because claim 15 is requiring a cured fluorocarbon elastomer being present in the specified discrete phase dimensions of particles less than 10 microns.

3. Inventions of Group III and Groups I+II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made by another and materially different process such as a mixing the ingredients without curing agent since an elastomeric component is already cured.

4. Inventions of Groups I+II and Group IV are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions have different functions and different modes of operation because a processable rubber composition can be used as an adhesive or a film.

5. Inventions of Group III and Group IV are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made by another and materially different process that do not require a curative agent.

6. Inventions of Group III and Groups V+VI are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have

different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions have different functions and different effect because a method of making in Group III is requiring a curative agent whereas a method of making a shaped rubber articles in Group V discloses of using a recycling scrap material by dynamic vulcanization, and a Group VI discloses a process of making a shaped plastic article by dynamic vulcanization and does not require a curative agent.

7. Inventions of Group V and Group IV are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made by another and materially different process that does nor require a recycling scrap material.

8. Inventions of Group V and Group VI are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions have different functions and different effect because a process for making a shaped plastic article does not require a recycling scrap material.

9. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

10. This application contains claims directed to the following patentably distinct species of the claimed invention: Different curative agent comprises a polyol in claim 32 and a peroxide in claim 33.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claim 23 is generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record

showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

11. During a telephone conversation with Wangerow, Ronald on September 1, 2005 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-14. Affirmation of this election must be made by applicant in replying to this Office action. Claims 15-58 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. Claims 1-2, 10 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Rees U.S. Patent 5,006,594.

Rees discloses blend comprising a two-phase composition having a continuous phase and a dispersed phase, together with a tetrafluoroethylene copolymer. The continuous phase consists essentially of a melt-processible crystalline thermoplastic fluorocarbon resin containing a minimum of 38% by weight of fluorine. A dispersed phase consists essentially of an amorphous crosslinked fluoroelastomer containing at least about 50% by weight fluorine. The dispersed phase is present in the amount between about 50 and 90% by weight of the two-phase composition. The blends contain 1-5 wt.% of a non-fibrillating, dispersed-process-produced, non-melt-processible tetrafluoroethylene copolymer comprising tetrafluoroethylene and a comonomer selected from a hexafluoropropylene or perfluoro(alkyl vinyl ether), and a mixture of them with enough said comonomer present to cause the copolymer to compound uniformly with said fluorocarbon resin and said fluoroelastomer without forming visible agglomerates, column 2, lines 30-49 and claim 1 at column 13. A melt-processible crystalline fluorocarbon resin comprises: a copolymer of tetrafluoroethylene and ethylene or a homopolymer of vinylidene fluoride, or a copolymer of chlorotrifluoroethylene with ethylene, column 3, lines 9-21. These melt-processible crystalline fluorocarbon resins are readable for being a partially fluorinated thermoplastic polymer in the present claims. The amorphous crosslinked=cured fluoroelastomer is readable for being cured fluorocarbon elastomer in the present claims. The cured fluoroelastomer can be present in the amount of 60 to 80 % by weight, column 3, lines 58-61, for the present claims 1 and 2. The elastomeric fluorocarbon such as a copolymer, for example,

vinylidene fluoride and hexafluoropropylene is readable in the present claims 10 and 12. The non-melt-processible tetrafluoroethylene copolymer is readable for being a fully fluorinated thermoplastic polymer in the present claims. Rees discloses a melt blending and a melt-processible composition comprising a cured fluoroelastomer, a melt-processible crystalline thermoplastic fluorocarbon resin and a non-melt-melt-processible tetrafluoroethylene copolymer. The statement that "a cured fluorocarbon elastomer dispersed in a matrix comprising a thermoplastic material" would be inherent in Rees invention because Rees discloses a dispersion-processible composition wherein a dispersed phase includes an amorphous crosslinked fluoroelastomer, abstract.

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

15. Claims 3-9, 11 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rees U.S. Patent 5,006,594 as applied to claims 1-2, 10 and 12 above.

Rees does not disclose a single melting temperature of less than 305 C or 250 C.

It would have been obvious to one of ordinary skill in the art to consider that the resulting fluorinated thermoplastic elastomer composition in Rees invention can have a

single melting temperature because the chemical formulation of the compositions formed in such way that the comonomers uniformly compounded with the fluorocarbon resin and the fluoroelastomer (column 2, lines 47-49) and the composition have improved extrusion characteristics, column 6, lines 55-56.

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. References have been considered.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Olga Asinovsky whose telephone number is 571-272-1066. The examiner can normally be reached on 9:00 to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Olga Asinovsky
Examiner
Art Unit 1711

OA.
August 30, 2005

James J. Seidleck
Supervisory Patent Examiner
Technology Center 1700